60 kW

Liquid Cooled Gas Engine Generator Sets

Standby Power Rating
60 kW 60 Hz

Model Numbers: 05649
05650

GENERAC 2.4L ENGINE
Turbocharged/Aftercooled
Gaseous Fueled

STANDARD EQUIPMENT

- All input connections in one single area
- High coolant temperature shutdown
- Low oil pressure shutdown
- Low coolant level automatic shutdown
- Overspeed automatic shutdown
- Crank timer
- Exercise timer
- Oil drain extension
- Cool flow radiator
- Closed coolant recovery system
- UV/Ozone resistant hoses
- Watertight state of the art electrical connectors
- Mainline circuit breaker
- Radiator drain extension
- Battery charge alternator
- 2 Amp static battery charger
- Battery and battery cables
- Battery rack
- Fan and belt guards
- Isochronous governor
- Flex fuel line
- Hour meter

FEATURES

- Innovative design and fully prototype tested
- UL2200 Listed
- Solid state frequency compensated voltage regulator
- Dynamic and static battery charger
- Sound attenuated acoustically designed enclosure
- Quiet test for low noise level exercise
- Acoustically designed engine cooling system
- High flow low noise factory engineered exhaust system
- State of the art digital control system with R100 digital control panel
- Watertight electrical connectors
- Rodent proof construction
- High efficiency, low distortion Generac designed alternator
- Vibration isolated from mounting base
- Matching Generac transfer switches engineered and tested to work as a system
- All components easily accessible for maintenance
- Electrostatically applied powder paint

GUARDIAN Elite
by Generac Power Systems, Inc.

APPLICATION & ENGINEERING DATA

60 kW

GENERATOR SPECIFICATIONS

TYPE	Synchronous
ROTOR INSULATION	Class H
STATOR INSULATION	Class H
TOTAL HARMONIC DISTORTION	<5%
TELEPHONE INTERFERENCE FACTOR (TIF)	<50
ALTERNATOR OUTPUT LEADS 3 PHASE	4 wire
BEARINGS	Sealed Ball
COUPLING	Flexible Disc
LOAD CAPACITY (STANDBY RATING)	60 kW
EXCITATION SYSTEM	Direct

NOTE: Generator rating and performance in accordance with ISO8528-5, BS5514, SAE J1349, ISO3046, and DIN6271 standards.

VOLTAGE REGULATOR

TYPE	Electronic
SENSING	Single Phase
REGULATION	± 1%
FEATURES	V/F Adjustable Adjustable Voltage and Gain LED Indicators

GENERATOR FEATURES

- ❒ Revolving field heavy duty generator
- ❒ Directly connected to the engine
- ❒ Operating temperature rise 120 °C above a 40 °C ambient
- ❒ Insulation is Class H rated at 150 °C rise
- ❒ All models are fully prototyped tested

CONTROL PANEL FEATURES

❒ SEVEN LED INDICATOR LIGHTS
- System ready
- Low fuel pressure
- Low battery
- Low oil pressure
- High coolant temp/low coolant temp
- Overspeed
- Overcrank

❒ ADDITIONAL FUNCTIONS
- Utility sensing
- Delay on utility failure for engine start
- Engine warm-up before transfer
- Delay to retransfer to utility
- Engine cooldown timer
- Exerciser not set
- Hour meter

❒ INTERNAL FUNCTIONS:
- 3 position switch (auto, off and manual)
- 2 wire start for any transfer switch
- Communicates with the Generac RTS transfer switch
- Built-in 7 day exerciser
- Selectable engine speed at exercise
- Governor controller is built into the master control board
- Temperature range -40 °C to 70 °C

ENGINE SPECIFICATIONS

MAKE	Generac
MODEL	2.4 Liter
CYLINDERS	Inline 4
DISPLACEMENT	2.4 Liter
BORE	3.41
STROKE	3.94
COMPRESSION RATIO	8.5:1
INTAKE AIR SYSTEM	Turbocharged/Aftercooled
VALVE SEATS	Hardened
LIFTER TYPE	Hydraulic

GOVERNOR SPECIFICATIONS

TYPE	Electronic
FREQUENCY REGULATION	± Isochronous
STEADY STATE REGULATION	± 0.25%
ADJUSTMENTS FOR:	
Speed	Yes
Droop	Yes

ENGINE LUBRICATION SYSTEM

OIL PUMP	Gear
OIL FILTER	Full flow spin-on cartridge
CRANKCASE CAPACITY	4 Quarts

ENGINE COOLING SYSTEM

TYPE	Closed
WATER PUMP	Belt driven
FAN SPEED	2100
FAN DIAMETER	22 inches
FAN MODE	Puller

FUEL SYSTEM

FUEL TYPE	Natural gas, propane vapor
CARBURETOR	Down Draft
SECONDARY FUEL REGULATOR	Standard
FUEL SHUT OFF SOLENOID	Standard
OPERATING FUEL PRESSURE	5" - 14" H_2O

ELECTRICAL SYSTEM

BATTERY CHARGE ALTERNATOR	12V 30 Amp
STATIC BATTERY CHARGER	2 Amp
RECOMMENDED BATTERY	Group 24F, 525CCA
SYSTEM VOLTAGE	12 Volts

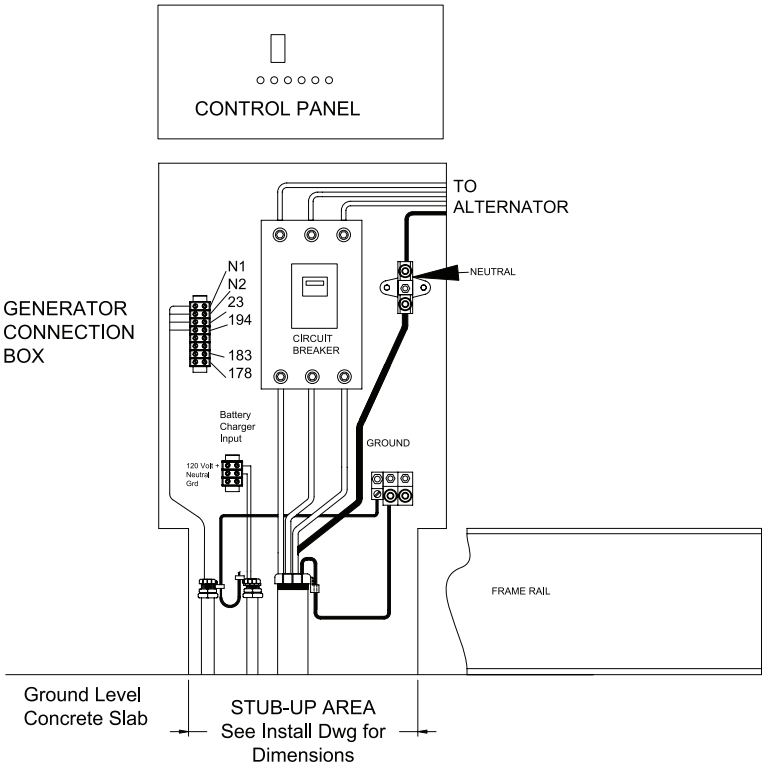
Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528 and DIN6271).

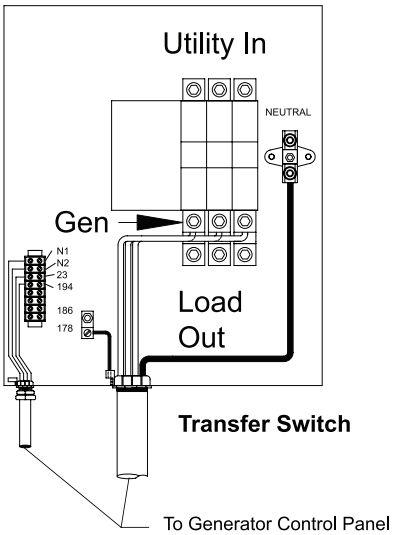
OPERATING DATA

KW RATING	60		
ENGINE SIZE	2.4 Liter		
GENERATOR OUTPUT VOLTAGE/KW - 60Hz	**KW**	**AMP**	**CB Size**
120/240V, 1-phase, 1.0 pf	60	250	300
GENERATOR LOCKED ROTOR KVA AVAILABLE @ VOLTAGE DIP OF 35%			
Single phase or 208/240 3-phase	120		
ENGINE FUEL CONSUMPTION (Natural Gas) (Propane)	**Natural Gas**	**Propane**	
	(ft^3/hr.)	(gal/hr.)	cu ft/hr
Exercise cycle	123	1.34	49.3
25% of rated load	267	2.7	101
50% of rated load	483	5.0	183
75% of rated load	672	7.0	255
100% of rated load	862	9.0	327
ENGINE COOLING			
Air flow (inlet air including alternator and combustion air) ft^3/min.	3,280		
System coolant capacity US gal.	2.5		
Heat rejection to coolant BTU/hr.	270,000		
Max. operating air temp. on radiator °C (°F)	60 (150)		
Max. ambient temperature °C (°F)	50 (140)		
COMBUSTION AIR REQUIREMENTS			
Flow at rated power 60 Hz cfm	180		
SOUND EMISSIONS IN DBA			
Exercising at 7 meters	65		
Normal operation at 7 meters	72		
EXHAUST			
Exhaust flow at rated output 60 Hz cfm	494		
Exhaust temp. at muffler outlet °F	1,050		
ENGINE PARAMETERS			
Rated synchronous RPM 60 Hz	3600		
HP at rated KW 60 Hz	94		
POWER ADJUSTMENT FOR AMBIENT CONDITIONS			
Temperature Deration			
3% for every 10 °C above - °C	25		
1.65% for every 10 °F above - °F	77		
Altitude Deration			
1% for every 100 m above - m	915		
3% for every 1000 ft. above - ft.	3000		

RATING: All three phases units are rated at 0.8 power factor. All single phase units are rated at 1.0 power factor. STANDBY RATING: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046-1. Design and specifications are subject to change without notice.

INTERCONNECTIONS



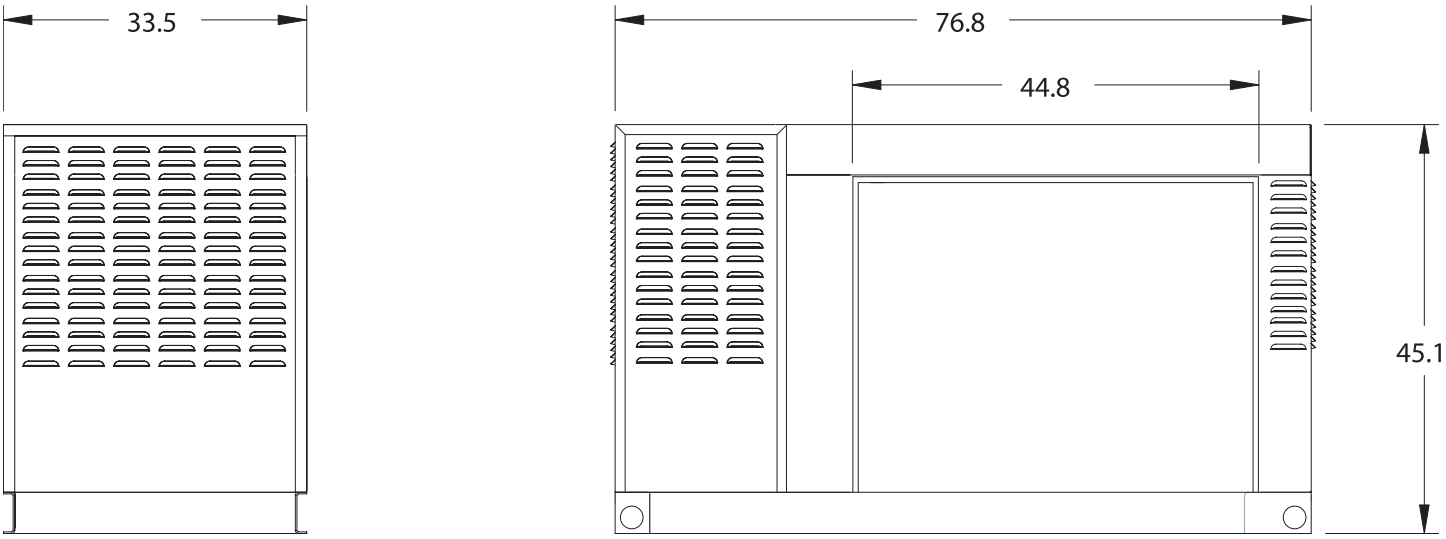


CIRCUIT BREAKER SIZE

kW	VOLTS	/ AMPS	LUG SIZE
60	240 1ø	300	(2) 250 mcm to 2 - 1/0 or (1) 600 mcm to #4

Installation Drawing Ref. No. 0F9577

INSTALLATION LAYOUT



WEIGHT: 1650 lbs.

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